The rendition Package

Creating multiple renditions (versions)
from the same source file

D. P. Story
Email: dpstory@uakron.edu
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1 (*package)

1 The rendition Package

This is a short package sets up comment environments, called rendition. These
renditions can be included or excluded according to the value of the rendition
option. The basic options of this package are max and rendition

\usepackage[\max=4,\rendition=3]{renditions}

In the above example, \max=4 declares that there are 4 renditions in the document,
the option \rendition=3 causes the package to include \rendition3, and to exclude
all the others \rendition1, \rendition2, and \rendition4.

The rendition package is a stand-alone package, but it was designed for use
with the AeB Builder utility.

Below is an example of a document that uses the rendition package.
\documentclass{article}
\usepackage[%
  max=4,
  rendition=3
]{renditions}
\begin{document}
This is a test file for renditions.
\begin{rendition1}
Rendition 1
\end{rendition1}
\begin{rendition2}
Rendition 2
\end{rendition2}
\begin{rendition3}
Rendition 3
\end{rendition3}
\begin{rendition4}
Rendition 4
\end{rendition4}
\end{document}

There are two options for the \texttt{renditions} package: \texttt{max} and \texttt{rendition}. The value of \texttt{max} sets the maximum number of renditions in the document; the value of the \texttt{rendition} key determines which of the renditions is to be typeset. You can also select the rendition using the \texttt{\rendition} command, as illustrated to the left. (The \texttt{\rendition} command in the preamble would override the value of the \texttt{rendition} key.)

The various renditions are defined with the \texttt{rendition<n>} environment. These environments are just comment environments created by the \texttt{comments} package, and they are selectively included or excluded depending on the value of the rendition defined by either the \texttt{rendition} key or the \texttt{\rendition} command.

The \texttt{rendition} package does modular arithmetic in the case when rendition $> \texttt{max}$. For example, if \texttt{max=4}, and \texttt{rendition=6}, then the rendition displayed is \texttt{rendition=2}.

There is a third way of setting the value of the rendition parameter, and that is through the \texttt{rendition.cfg} file. If you create a file with the code

\begin{verbatim}
\ExecuteOptionsX{rendition=3}
\end{verbatim}

Then \texttt{rendition=3} is used.

\textbf{Default values.} The default value of \texttt{max}, if it is not specified is 3, and the default value of \texttt{rendition} if it is not specified is 1.

There should not be a \texttt{rendition<n>} environment with a number, \texttt{<n>}, greater than that specified by \texttt{max}; however, if the value of \texttt{rendition} is greater than \texttt{max}, modular arithmetic is performed, and the rendition numbered \texttt{rendition \text{Mod} max} is used.

\textbf{History.} The core of this package was originally developed for my online testing system TAOAS (The Acrobat \TeX\ Online Assessment System). In that system, the \texttt{rendition.cfg} approach was used to select a rendition to be used.

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2 The Main Code

We use xkeyval to create the two options max and rendition.

\RequirePackage{xkeyval}

**max** The maximum number of renditions present in this file. The value of max must be a positive integer, no checking takes place. The default number is 3.

**rendition** The number of the rendition what you want to use for this run of the latex compiler. The default number is 1.

\DeclareOptionX{max}{\def\ren@numberOf{#1}}
\def\ren@numberOf{3}
\DeclareOptionX{rendition}{\def\thisrendition{#1}}
\def\thisrendition{1}

Input the configuration file, if it exists. This file normally contains the line of \LaTeX code \ExecuteOptions{rendition=<n>}
\InputIfFileExists{rendition.cfg}{\{}\{}

Process the options.
\ProcessOptionsX

The comment package is required.
\RequirePackage{comment}

Based on the value of max, we create the requested number of rendition environments: rendition1, rendition2,..., rendition<max>.
\let\save@message\message\let\message\@gobble
\@tempcnta=0
\@whilenum\@tempcnta<\ren@numberOf\do{\%
\@tempcntb=\@tempcnta\advance\@tempcntb1
\edef\temp@exp{\noexpand\excludecomment{rendition\the\@tempcntb}}\%
\temp@exp
\expandafter\let\csname Afterver\the\@tempcntb Comment\endcsname\relax
\advance\@tempcnta1\}%\let\message\save@message

We include the selected version at the beginning of the document.
\AtBeginDocument{\includecomment{rendition\thisrendition}}

\rendition A convenience macro for setting the current renditions. This command defines the command \thisrendition, which expands to the selected rendition number. If the value of \thisrendition is greater than max (\ren@numberOf), modular arithmetic is performed, and \thisrendition is redefined.
\def\rendition#1{\def\thisrendition{#1}\%
\ifnum\thisrendition>\ren@numberOf\%
\@tempcnta=\thisrendition
\@tempcntb=\@tempcnta
\advance\@tempcnta-1 \divide\@tempcnta\ren@numberOf
\multiply\@tempcnta\ren@numberOf
\%
}
We execute \rendition for the selected rendition.

\expandafter\rendition\expandafter{\thisrendition}